133749

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

TRANSMISSION VIA FACSIMILE AND U.S. MAILS

REPLY TO THE ATTENTION OF:
HSE-5J

JAN 06 1992

Mr. Lawrence D. Dalen
Barr Engineering Company
8300 Norman Center Drive
Minneapolis, Minnesota 55437-1026

Dear Mr. Dalen:

RE: Review and Commentary of the Supplemental Extent of Contamination Study Work Plan for the Waukegan Tar Pit Site PRP Removal Action, Docket No. V-W-'91-C-115

A review of the referenced facility's work plan has been completed and the following comments are submitted by this Agency for incorporation into the final work plan for this removal action.

The work plan represents proposals to more accurately define the extent of contamination of tar from the " Tar Pit " to the surrounding property, including soil and groundwater media.

Page 1, Section 2:

The work plan proposes nine additional soil borings in order to collect soil samples to further evaluate the extent of contamination of the tar. Based on earlier studies, borings B-36 through B-39, to the south and west of the visible tar pit, may be sufficient to delineate the lateral extent of contamination in these directions. However, borings B-40 through B-44 to the north and east of the visible tar pit are proposed only to the artificial boundary of the chain link fence erected to limit access to the site (refer to Figure 1 of the EOC).

Previous investigations have already identified the presence of free tar or soil containing tar in borings at the fence in the north and the east. Based on these exploratory drillings, boring numbers B-40 through B-44 are inadequate to determine the extent of contamination in these two directional locations at the Site.

Section C-2.1.1:

Soil samples will be collected continuously to a depth of 18 feet in each boring location, and every 2.5 feet to a total depth of 30 feet, or to top of clay hard pan.

Continuous sampling is recommended to the top of the hard pan because previous borings have uncovered " free tar " or tar in soil to a depth of 25 feet. Contamination may be missed at 2.5 foot intervals.

Each soil sample will be contained in a threaded glass jar. A Teflon-lined cap is recommended due to the presence of volatile compounds associated with tar and tar by-products.

Section 6: Proposals for soil sample analysis

The intent is to submit 4 or 5 samples thought to be "clean" based on field screening data (no photo-ionization detector readings) for analysis. Also, 2 or 3 samples that "appear to contain tar but on the edges of contamination" will be sent for analysis.

This practice of selecting samples for analysis may eliminate samples containing tar or tar by-products, not allowing for documentation of their presence at a boring location. The definition of " tar contamination " is not clear here, and it is not apparent whether visual inspection or positive PID readings will be used to document the presence of tar contamination in a soil sample.

Quality Assurance/Quality Control (QA/QC):

Analytical parameters and quality assurance/quality control are consistent with previous investigations and in accordance with Table 2 and the accompanying QA/QC plan.

Section C-2:

Proper drilling methods are proposed for completing the soil borings, but, based on earlier findings, the equipment decontamination procedures may be inadequate. Use of a decontamination pad and including a means of collecting the decontamination wastes while cleaning the drilling equipment is recommended. In addition, steam cleaning and trisodium phosphate may not be effective for removing tar from equipment. Use of a solvent such as acetone or methanol may be necessary in this effort.

Section C-1.2.2 & 1.3.5

The work plan calls for containerization of all chemicals and fluids collected from the decontamination procedures, and transportation of the material off-site. However, contaminated drill cuttings will be containerized in 17-H drums and left on-site.

Monitoring Well Installation and Sampling

Page 2, Section 2, Figure 1:

The proposed locations and depths of the four groundwater monitoring wells are adequate for monitoring groundwater for tar by-products. An additional four deep wells may be necessary to monitor the groundwater for contaminants that are heavier than water such as loose tar flowing at the surface of the clay hard pan. Recall that tar was found in Boring No. 18 at a 25 ft. depth.

Page 2, Section 3 states that 3.25 inch inside diameter (ID) hollow stem augers will be used for both soil boring and monitoring well installation. A discrepancy exists here in that the specification section (C-3.1) calls for the appropriate 6.25 ID hollow stem augers for the monitoring wells. There also are differences between the description of the stainless steel well screen in the text of the report (Pg.3) and the specifications (Sec. C-3.3.2). The type of stainless steel well screen and casing to be used is not stated. Stainless steel type 304 or 305 could be used.

On Page 3, the text states that the screen will be welded to the casing and in Section C-3.3.2 the specs require that the screen and casing have female and male threaded ends welded on them. Screen and casing that end in male and female threads are recommended for connecting the two (Schedule 5, ASTM type). The well screen should be of continuously wire-wound design. Also, the screen and casing should be thoroughly decontaminated on-site prior to installation.

A flush mount protective outer well casing should be used instead of the 8 foot long protective outer casing. If, as stated, the top of the well screen will be set at approximately 3 feet, and assuming a 3 foot stick-up of the riser pipe, then the 8 foot long outer protective casing would cover approximately 2 feet of the well screen. A weep hole should be installed in the outer

Understand that as new requirements or information or technology becomes apparent for this project, this Agency may require further revisions to this work plan. The comments provided in the foregoing review letter should be addressed and made a part of the work plan previously submitted. Similarly, the work plan becomes a part of the Order issued for this facility's removal/remediation plan.

If you have additional questions concerning the aforementioned matters, contact me via telephone (312/353-7615) and reduce such questions to writing as well.

Very truly yours,

Paul R. Steadman
On-Scene Coordinator
Emergency and Enforcement Response Branch

cc: Patrick Doyle, North Shore Gas Co.
Sean Mulroney, ORC, U.S. EPA, REG.V